STEVAL-IHM022V1

High density dual motor control demonstration board based on the STM32F103ZE microcontroller

Data brief

Features

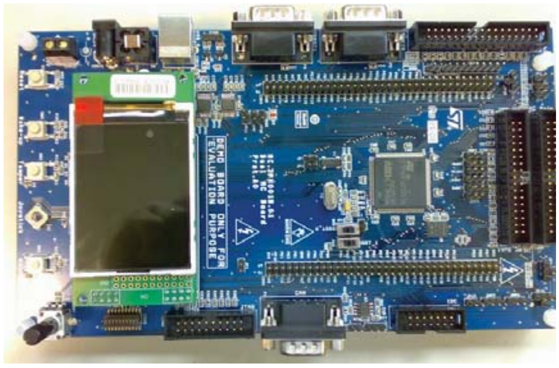
- Four 5 V power supply sources: 2-way screw connector, power jack, USB connector or daughterboard
- Boot from system or user Flash
- 64 Mb serial Flash included
- Two RS-232 channels with RTS/CTS handshake support on one channel
- USB 2.0 full speed connection
- CAN 2.0 A/B compliant connection
- Two full featured motor control connectors for field oriented control plus PFC support on one connector
- JTAG, SWD and trace debug support
- 240 x 320 TFT color LCD
- Joystick with 4-direction control and selector
- Reset, wakeup, tamper and user button
- Extension connectors for daughterboard or wrapping board
- RoHS compliant

Description

The STEVAL-IHM022V1 demonstration board is designed as a dual motor control development platform for STMicroelectronics' ARM Cortex™-M3 core-based STM32F103ZE microcontroller.

The board features full speed USB 2.0 and CAN 2.0 A/B compliant interfaces, 2 I^{2}S channels, 2 I^{2}C channels, 5 USART channels, 3 SPI channels, 2 DAC channels, internal 64 Kb SRAM and 512 Kb Flash memory, and JTAG and SWD debugging support.

The board is designed to implement multiple motor control (up to three MC connectors are available) and offers an advanced user I/O interface (LCD QVGA display and joystick key).



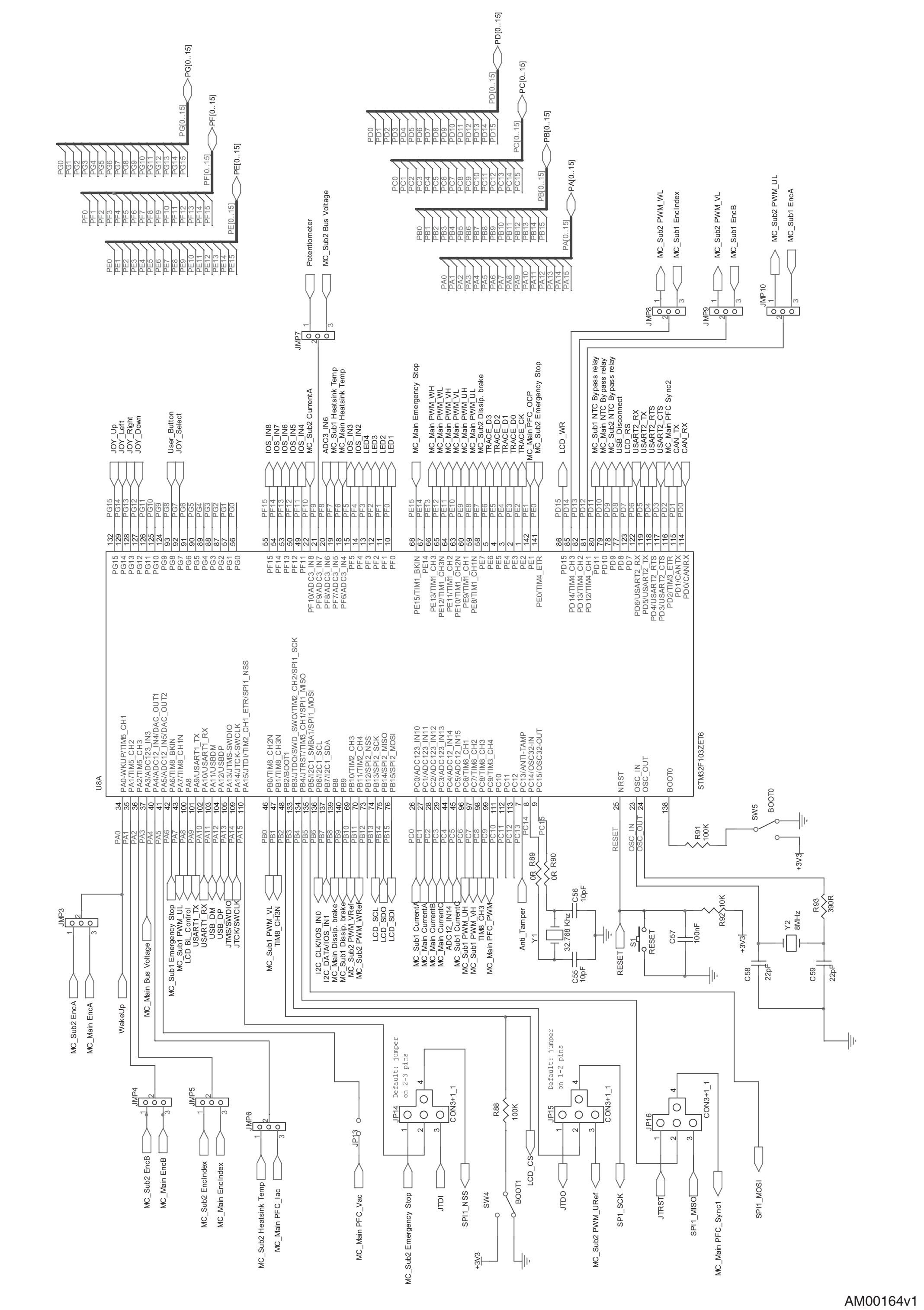
STEVAL-IHM022V1

AM00159V1

Extension headers make it easy to connect a daughterboard or wrapping board for specific applications.

1 STEVAL-IHM022V1 schematic diagrams

Figure 1. STM32F103ZE microcontroller



AM00164v1

Figure 2. Extension and I²C connectors

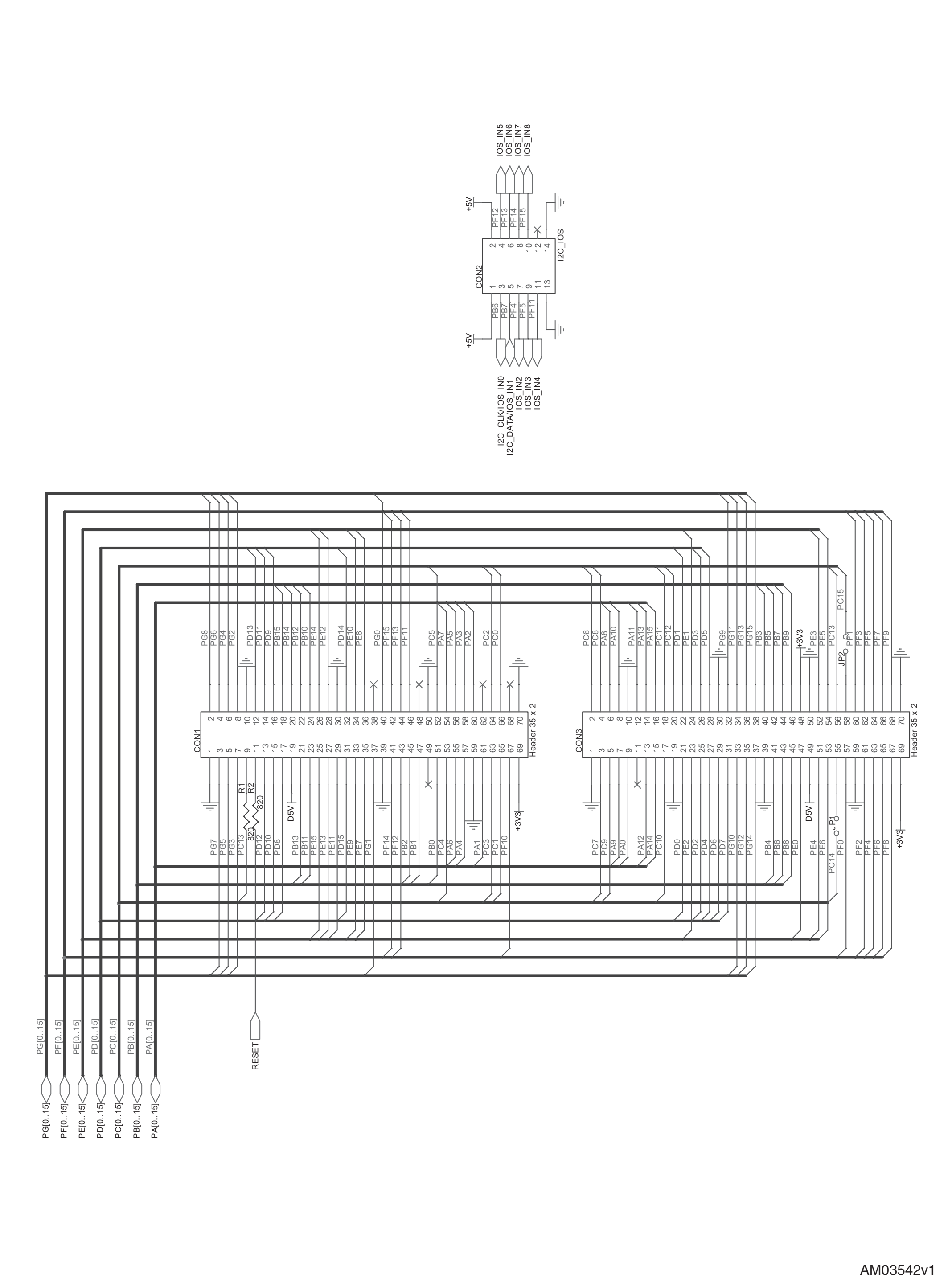
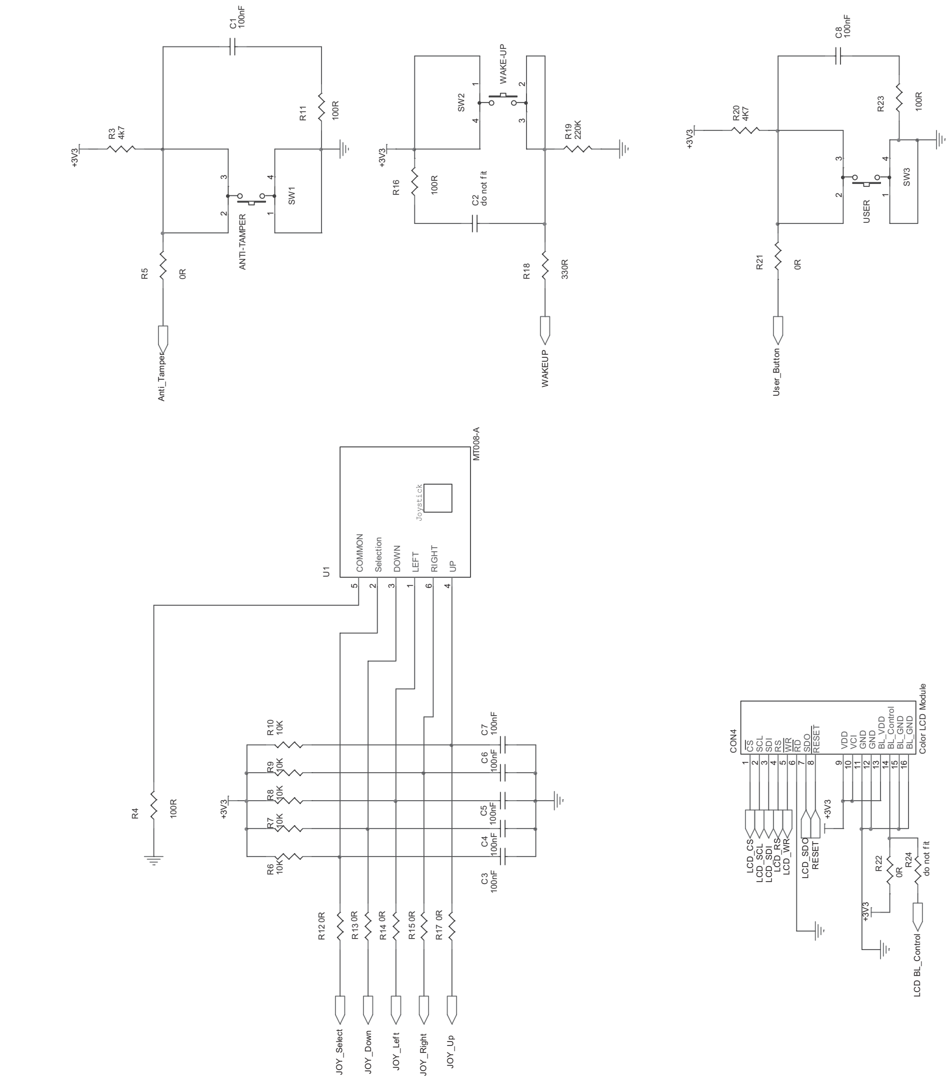


Figure 3. Joystick, buttons and LCD connections



AM03543v1

Figure 4. JTAG and trace connectors

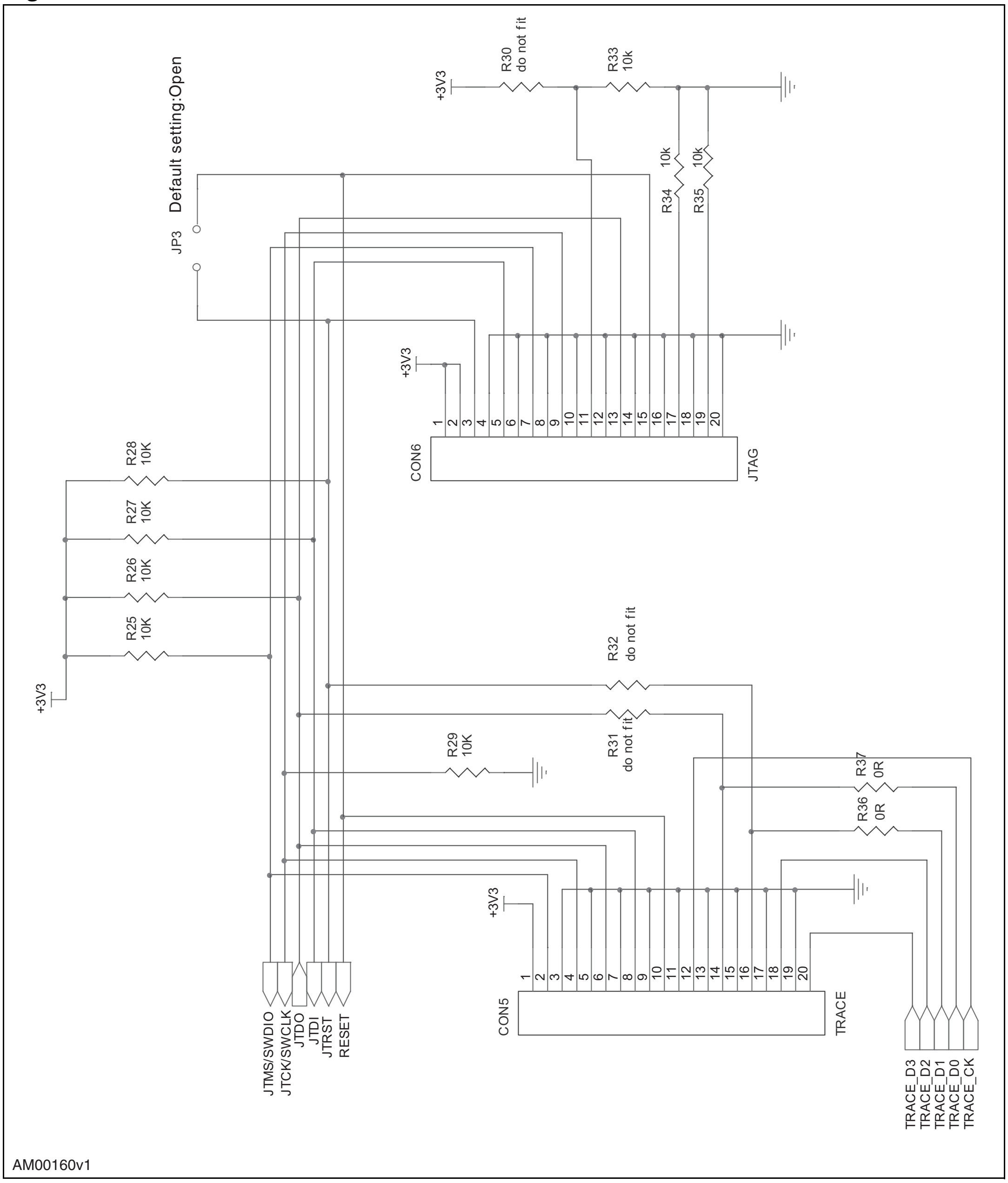


Figure 5. Motor control connector main

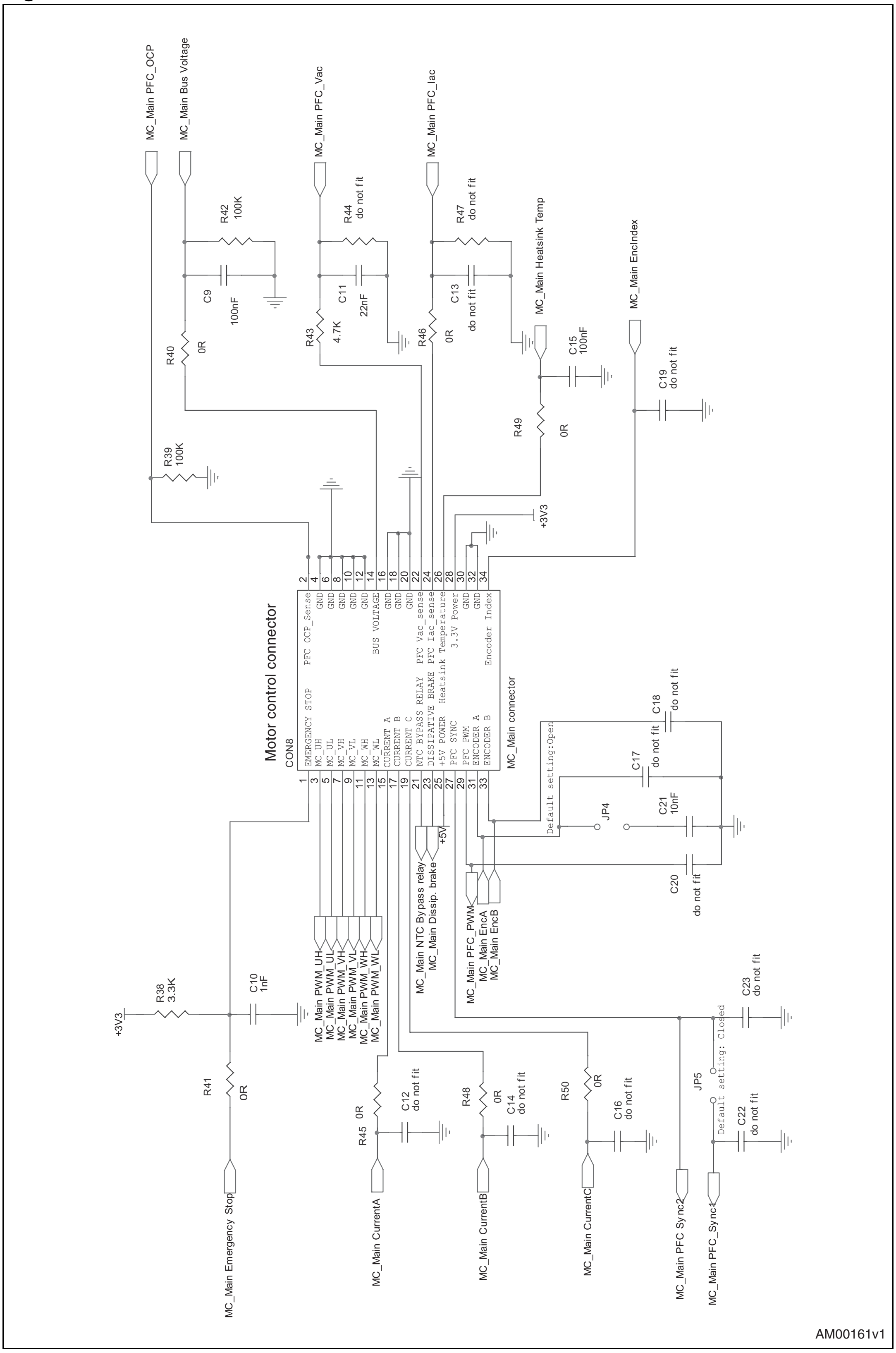


Figure 6. Motor control connector sub1

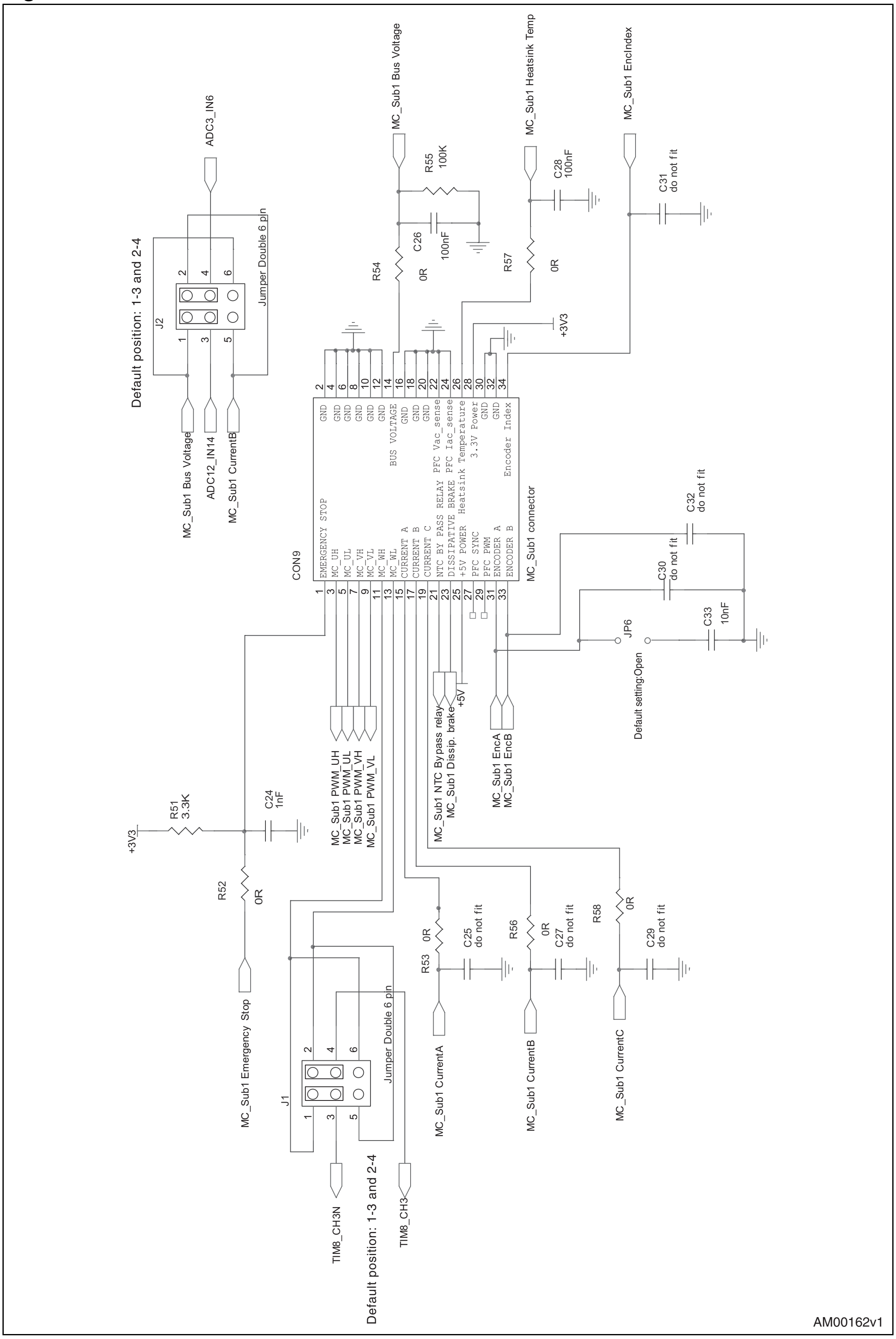


Figure 7. Motor control connector sub2

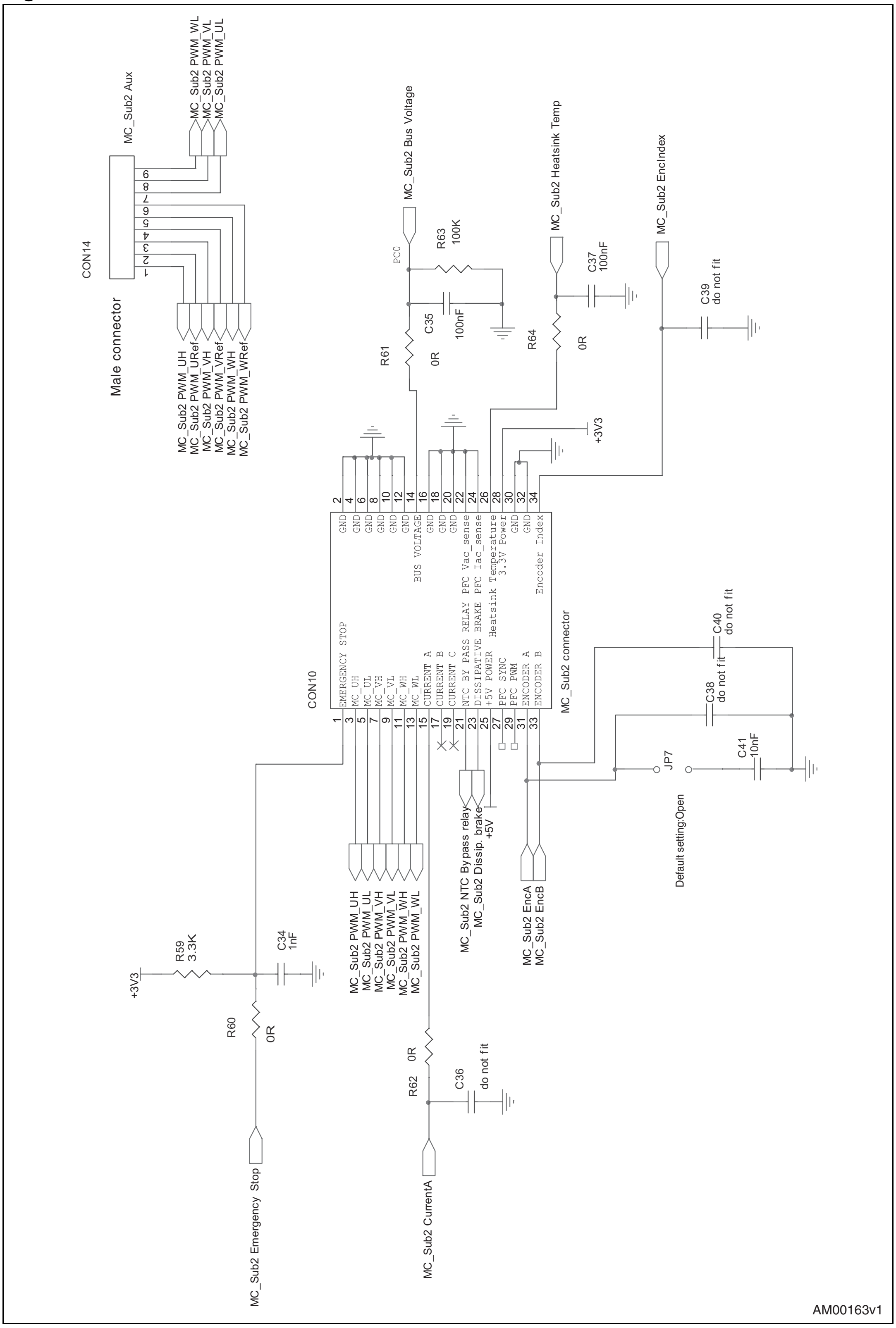


Figure 8. Peripherals

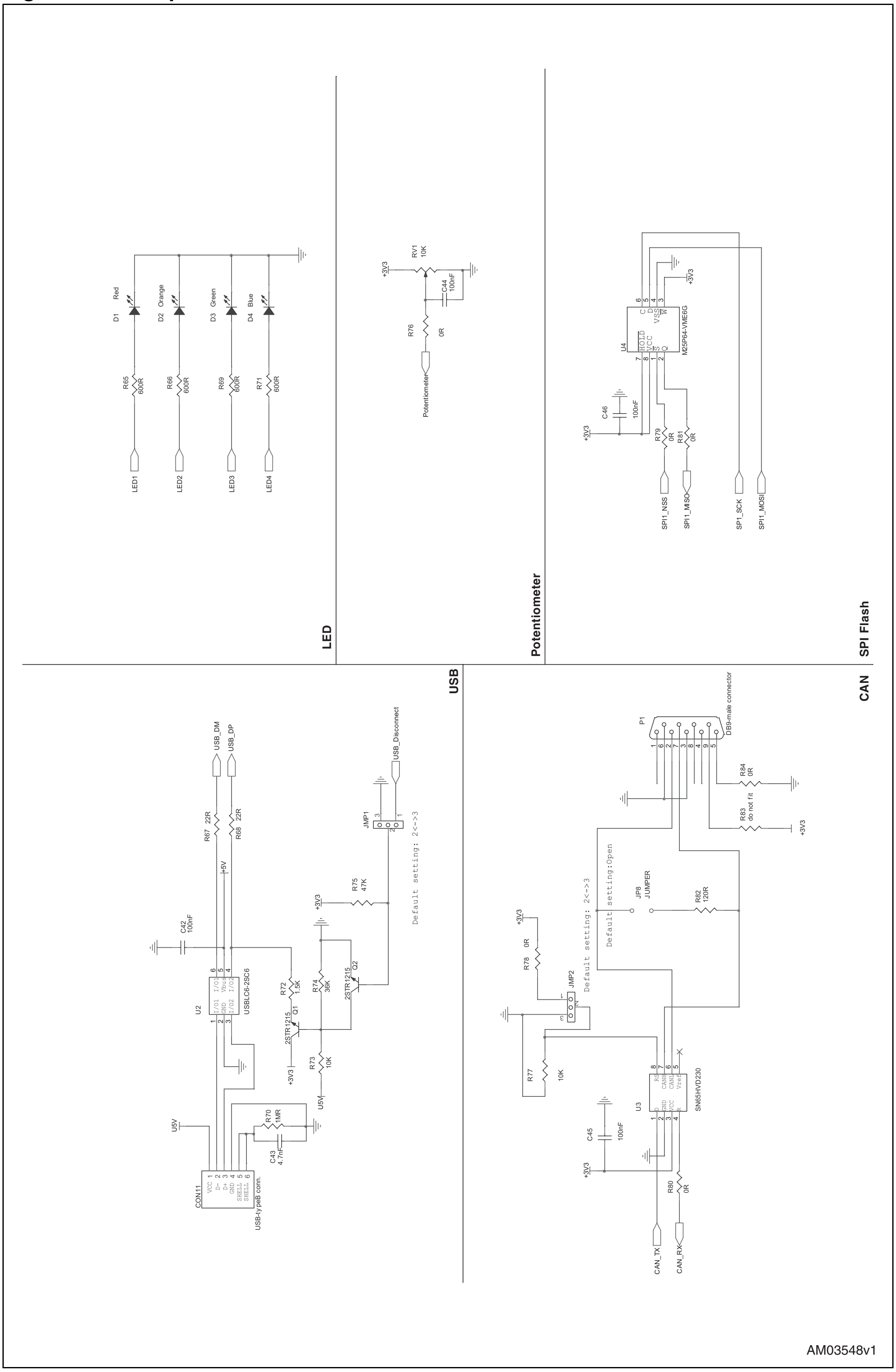


Figure 9. Power supply

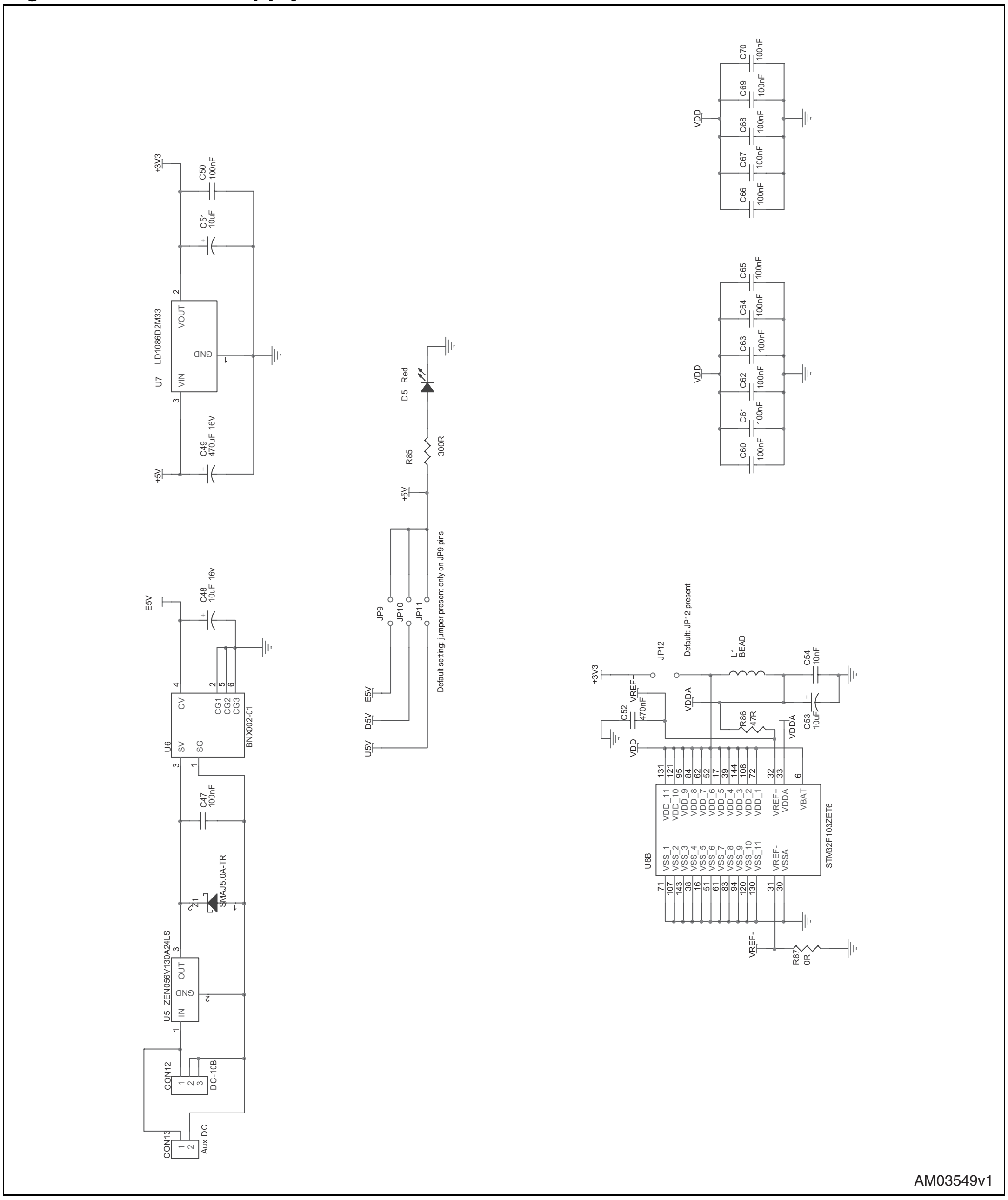
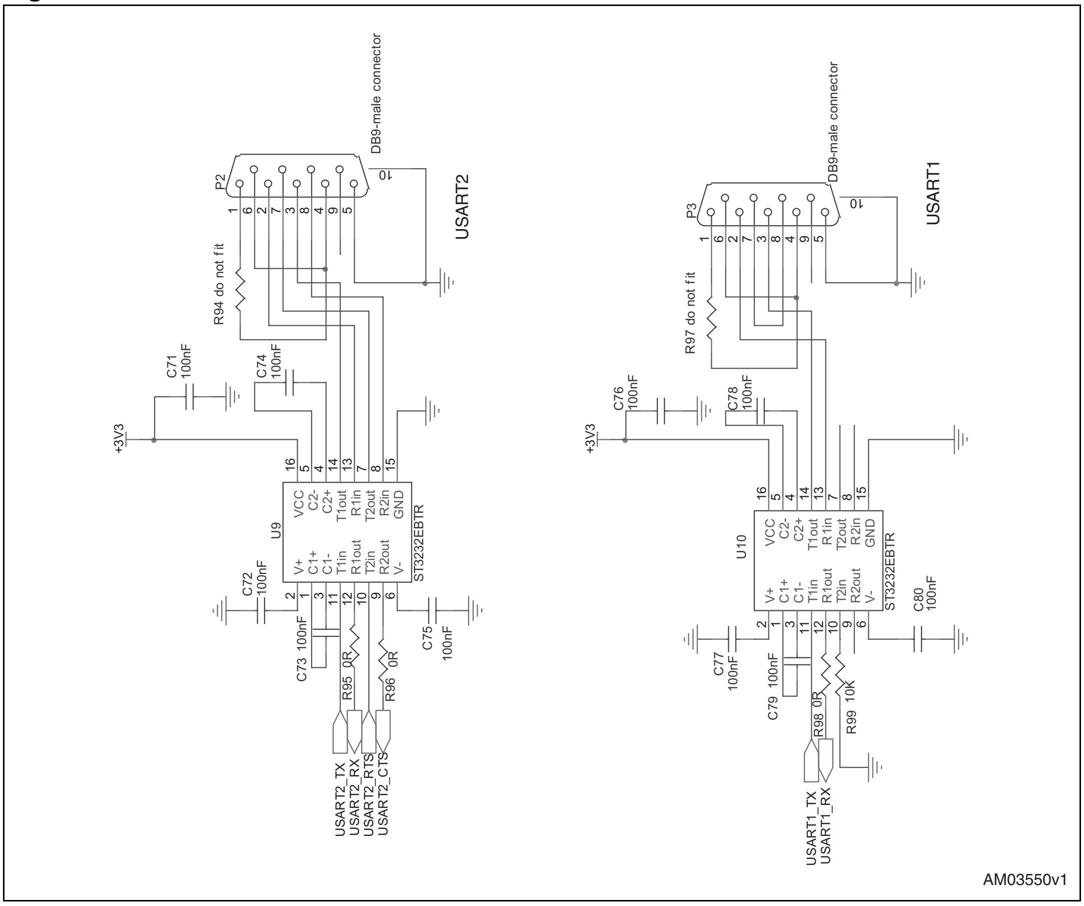


Figure 10. RS-232 connectors



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
29-Jul-2009	1	Initial release.